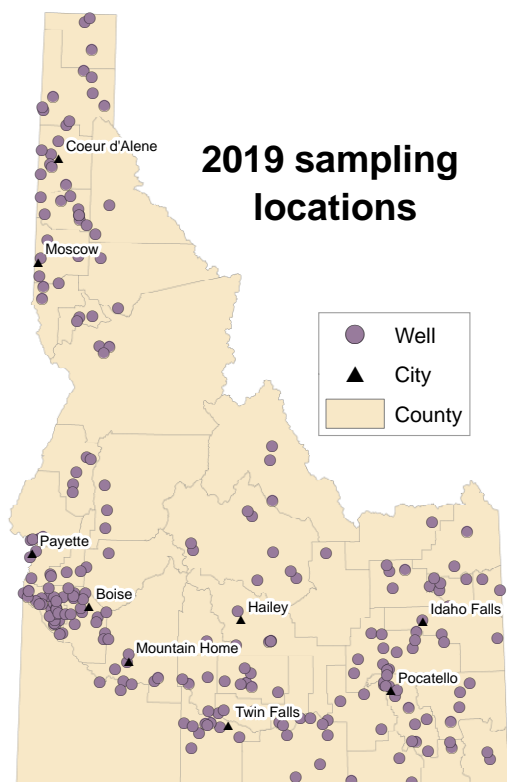




Statewide Groundwater Quality Monitoring Program 2019 Sampling Season Summary



Program Overview

The Statewide Groundwater Quality Monitoring Program (Statewide Program) is an information-gathering, non-regulatory effort to understand the quality of Idaho's aquifers. The program establishes a systematic and repetitive approach to monitor groundwater at the statewide level.

Since 1990, over 2,100 wells have been sampled for the program, and the current active network includes approximately 1,500 well sites. Wells that are sampled include domestic, irrigation, stock, and municipal wells, and wells are rotated in and out of the program on a five-year cycle. Sampling for the Statewide Program takes place annually during the summer months and is done in collaboration with the Idaho Department of Health and Welfare. This report provides an overview of the results of sampling for 2019.

The goals of the Statewide Program are to:

- Determine the overall quality of Idaho's groundwater
- Identify existing or emerging problems
- Determine changes in groundwater quality over time

What does the Statewide Program test for?

The table below lists what was tested for in 2019.

Field Parameters	Common Ions
Conductivity	Alkalinity
Depth to Water	Chloride
Dissolved oxygen	Fluoride
pH	Sulfate
Temperature	Nutrients
Metals	Ammonia
Arsenic	Nitrate+Nitrite
Cadmium	Total Phosphorus
Calcium	Pesticides
Copper	Atrazine
Iron	Glyphosate
Magnesium	Imidacloprid
Manganese	Metolachlor
Potassium	Emerging Contaminants
Selenium	BPA
Silica	Triclosan
Sodium	Other
Uranium	Methane*
	Nitrogen isotope*

*Sampled at a subset of sites in collaboration with the Department of Environmental Quality (DEQ). Refer to DEQ for results.

Highlights from 2019 sampling

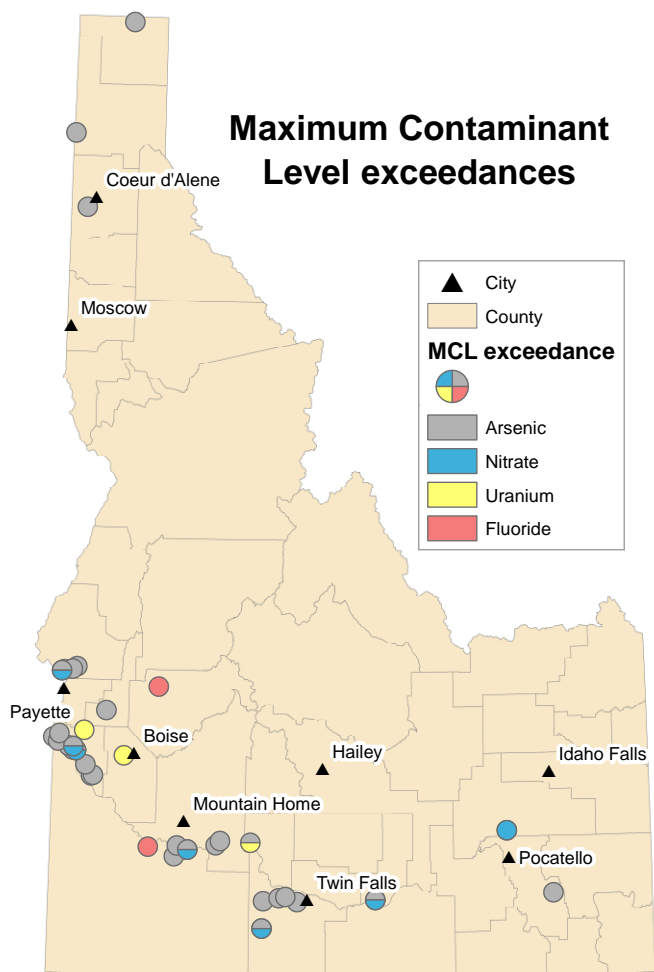
- 228 wells were sampled, including 6 wells sampled for the first time
- Wells were sampled in all 44 counties
- Detections of concern were found at 36 wells (see next page for more information)
- Field data collection was entirely completed electronically using Survey¹²³ following a successful pilot project in 2018





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Detections of Concern



Maximum Contaminant Levels (MCLs) are the highest level of a contaminant allowable in drinking water systems. Of the 228 wells sampled, 36 sites exceeded one or more MCLs. The following exceedances were found and are shown in the figure above: arsenic (31 sites), nitrate (7 sites), uranium (3 sites), and fluoride (2 sites).

For more information on MCLs, refer to: <https://www.epa.gov/ground-water-and-drinking-water/national-primary-drinking-water-regulations>

Arsenic

Arsenic is naturally-occurring and is primarily derived from felsic-volcanic rocks (granite and rhyolite) and their sediments. The MCL for arsenic is 10 µg/L (or 0.010 mg/L) and is the most commonly exceeded MCL in Idaho's groundwater. High concentrations of arsenic are mostly found in the southwest portion of the state. The table below shows the summary of concentration ranges in 2019 across the state.

ARSENIC	Range (µg/L)	Number of sites (% of sites)
	0 – 5	174 (76.3%)
	5.1 – 10	23 (10.1%)
	10.1 - 30	23 (10.1%)
	> 30	8 (3.5%)
	Max value	140 µg/L

Nitrate

Nitrate primarily originates from anthropogenic sources such as septic waste, animal waste, and fertilizer. The MCL for nitrate is 10 mg/L, however, concentrations above 2 mg/L generally indicate that the groundwater has been impacted by nitrate. The table below shows the summary of concentrations across the state in 2019.

NITRATE	Range (mg/L)	Number of sites (% of sites)
	0 – 2	154 (67.5%)
	2.1 – 5	42 (18.4%)
	5.1 - 10	25 (11.0%)
	> 10	7 (3.1%)
	Max value	26 mg/L

How do I access the data?

Groundwater data collected by the Statewide Program and other state agencies are housed in the Environmental Data Management System (EDMS) and are available for download at: <https://maps.idwr.idaho.gov/map/edms>

For more information, go to:

<https://idwr.idaho.gov/water-data/groundwater-quality/>

Or contact:

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